APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,128	10/18/2001	Gary J. Sullivan	MS1-946US	9382

22801   7590   07/09/2004

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EXAMINER
NATNAEL, PAULOS M

ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.		Applicant(s)
Office Action Summary	09/982,128		SULLIVAN, GARY J.
	Examiner		Art Unit
	Paulos M. Natnael		2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22 and 24-31* is/are rejected.

7)☒ Claim(s) *23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims **1-3, 5, 7-12, 16-18, 27, 30, 31** are rejected under 35 U.S.C. 102(e)

as being anticipated by Kesselring, U.S. Pat. No. 6,081,299.

Considering claim 1, Kesselring discloses all claimed subject matter, note;

a) encoding a first frame of data, is met by video encoder 415, fig. 4;

b) generating a first timestamp associated with the first frame of data,

wherein the first timestamp includes complete timing information, is met by

PTS adjuster 430 (fig.4) that examines the difference between the theoretical

PTS 427 and Oscillator clock 440 and outputs adjusted PTS 432 for each

frame of data in accordance to the end-of-field (EOF) interrupt signal 416 input to it from the encoder 415. (see disclosure on col. 6, lines 36-40)

c) transmitting the first frame of data and the associated first timestamp to a destination, is met by TSMux 435 Fig.4 which multiplexes the received adjusted PTS 432, video and audio data received from the video and audio encoders, respectively.

d) encoding a second frame of data, is met by video encoder 415, fig. 4;

e)generating a second timestamp associated with the second frame of data, wherein the second timestamp includes a portion of the complete timing information, is met by PTS adjuster 430 (fig.4) that examines the difference between the theoretical PTS 427 and Oscillator clock 440 and outputs adjusted PTS 432.

f) transmitting the second frame of data and the associated second timestamp to the destination, is met by TSMux 435 Fig.4 which multiplexes the received adjusted PTS 432, video and audio data received from the video and audio encoders, respectively.

Considering claim **2**, a method as recited in claim 1 further comprising:

a) encoding a third frame of data, *is also met by video encoder 415, fig. 4,*

which will continue to encode the next frame sequentially.

b) generating a third timestamp associated with the third frame of data,

wherein the third timestamp includes a portion of the complete timing

information, is also met by PTS adjuster 430 (fig.4) that examines the

difference between the theoretical PTS 427 and Oscillator clock 440 and

outputs adjusted PTS 432 for each frame of data in accordance with the EOF

interrupt 416 input to it from the encoder 415. (col. 6, lines 36-40)

c) transmitting the third frame of data and the associated third timestamp to

the destination, is also met by TSMux 435 Fig.4 which multiplexes the

received adjusted PTS 432, video and audio data received from the video

and audio encoders, respectively.

Considering claim **3**, a method as recited in claim 1 further comprising:

a) identifying timing information related to transmitting the first and second

frames of data, is met by PTS adjuster 430, fig.4.

b) transmitting the timing information to the destination, is also met by PTS

adjuster 430 which transmits the timing information adjusted PTS 432 to

TSMUX 435, which in turn multiplexes the data and transmits it to decoder.

Considering claim 5, a method as recited in claim 1 wherein the first

timestamp includes an offset value that is used to relate the time associated

with a frame of data to true time, is met by the adjusted PTS 432, fig.4;

Considering claim 7, a method as recited in claim 1 further comprising:

a) encoding a plurality of frames of data, is met by video encoder 415 (fig.

4) which encodes a plurality of frames of data sequentially input to it from

the A/D converter 405.

b) generating additional timestamps associated with each of the plurality of

frames of data, wherein the majority of the additional timestamps include a

portion of the complete timing information, is met by PTS adjuster 430

(fig.4) that examines the difference between the theoretical PTS 427 and

Oscillator clock 440 and outputs adjusted PTS 432 for each frame of data in

accordance to the EOF interrupt 416 input to it from the encoder 415. (col. 6,

lines 36-40)

Considering claim **8**, a method as recited in claim 1 further comprising:

a) encoding a plurality of frames of data, is met by video encoder 415 (fig. 4) which encodes a plurality of frames of data sequentially input to it from the A/D converter 405.

b) generating a full timestamp associated with one of the plurality of frames of data, wherein the full timestamp includes the complete timing information, is met by the PTS adjuster 430 (fig.4) that examines the difference between the theoretical PTS 427 and Oscillator clock 440 and outputs adjusted PTS 432 for each frame of data in accordance with the end-of-field (EOF) interrupt signal 416 input to it from the encoder 415. (see disclosure on col. 6, lines 36-40)

c) generating a plurality of compressed timestamps associated with the frames of data that are not associated with the full timestamp, wherein the compressed timestamps include a portion of the complete timing information, *is inherent* because Kesselring discloses compressed video, audio, as well as compressed timestamps that are compressed before being transmitted to the receiver for decoding. (see col. 1, lines 29-52)

Considering claim **9**, One or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 1, is met by the disclosure on col. 5, lines 59 thru col. 6, line 7, that "It will be understood that each block of the flowchart illustrations, and combinations of blocks in the flowchart illustrations, <u>can be</u> <u>implemented by computer program instructions</u>. <u>These program instructions</u> <u>may be provided to a processor to produce a machine, such that the</u> <u>instructions which execute on the processor create means for implementing</u> <u>the functions specified in the flowchart block or blocks</u>. The computer program instructions may be executed by a processor to cause a series of operational steps to be performed by the processor to produce a computer implemented process such that the instructions which execute on the processor provide steps for implementing the functions specified in the flowchart block or blocks."

Considering claim **10**, a method comprising:

a) identifying multimedia content to be encoded, is met by video encoder 415, fig. 4;

b) encoding the identified multimedia content into a plurality of frames of data, is also met by video encoder 415, fig.4;

c) generating a plurality of full timestamps associated with a portion of the

frames of data, wherein each full timestamp contains complete time

information, is met by the PTS adjuster 430 (fig.4) that examines the

difference between the theoretical PTS 427 and Oscillator clock 440 and

outputs adjusted PTS 432 for each frame of data in accordance with the end-

of-field (EOF) interrupt signal 416 input to it from the encoder 415. (see

disclosure on col. 6, lines 36-40)

d) generating a plurality of compressed timestamps associated with frames

of data that are not associated with a full timestamp, wherein each

compressed timestamp contains a portion of the complete time information,

is inherent because Kesselring discloses compressed video, audio, as well as

compressed timestamps that are compressed before being transmitted to the

receiver for decoding. (see col. 1, lines 29-52)

Considering claim **11**, a method as recited in claim 10 wherein the full

timestamps are associated with every Xth frame of data.

See rejection of claim 10(d).

Considering claim **12**, a method as recited in claim 10 wherein the full timestamps are associated with frames of data spaced apart by a predetermined time period, is inherent because data in the header would bee spaced apart by some predetermined time period. (See also figures 2 and 3 where it is shown PTS assigned for video vs. arrival of video frames)

Considering claim **16**, a method as recited in claim 10 further comprising storing the frames of data and the associated timestamps, is met by the disclosure "a computer-readable storage medium having computer-readable program code means embodied in said medium" may be utilized. (col. 12, lines 18-21)

Considering claim **17**, a method as recited in claim 10 further comprising transmitting the frames of data and the associated timestamps to a plurality of destinations, is met by TSMuX 435, fig.4;

Considering claim **18**, One or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 10.

Regarding claim 18, see rejection of claim 9.

Considering claim **27**, One or more computer-readable media having stored

thereon a computer program that, when executed by one or more processors,

causes the one or more processors to:

Encode a first frame of data;

generate a first timestamp associated with the first frame of data, wherein

the first timestamp includes complete time information;

encode a plurality of subsequent frames of data; and

generate a plurality of subsequent timestamps, wherein each of the

subsequent timestamps includes a portion of the time information.

Regarding claim 27, see rejection of claim 1;

Considering claim **30**, an apparatus comprising:

a) an encoded multimedia content source, is met by encoder 100,fig.1A.

b)a decoder coupled to receive encoded multimedia content from the

encoded multimedia content source, wherein the video content includes a

first frame of data having an associated first timestamp, such that the first

timestamp includes complete timing information for the first frame of data,

and wherein the encoded multimedia content includes a second frame of data

having an associated second timestamp, such that the second timestamp

includes a subset of the timing information included in the first timestamp, is

met by decoder 135 Fig.1A, that receives frames of video data and PTS

information from the encoder 100 through the connection 120, Figs. 1A and

4.

Considering claim **31**, an apparatus as recited in claim 30 wherein the

decoder is configured to decode the first frame of data and the second frame

of data, is met by decoder 135 (fig.1A) which is capable of decoding

sequentially received of encoded video and PTS information. Considering

claim 31, an apparatus as recited in claim 30 wherein the decoder is

configured to decode the first frame of data and the second frame of data, is

met by decoder 135 (fig.1A) which is capable of decoding sequentially

received of encoded video and PTS information.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

that one timestamp can be easily differentiated from another or that more

information may be added to a second, different timestamp.

Considering claim **6**, a method as recited in claim 1 wherein the second

timestamp includes a frame number.

See rejection of claim 4;

Considering claim **13**, a method as recited in claim 10 wherein the full

timestamps include hour information, minute information, second

information, and a frame number.

Regarding claim 13, see rejection of claim 4.

Considering claim **14**, a method as recited in claim 10 wherein the full

timestamps include an offset value that is used to relate the time associated

with a frame of data to true time, is met by the <u>adjusted</u> PTS 432, fig.4;

Considering claim **15**, a method as recited in claim 10 wherein the

compressed timestamps include a frame number.

See rejection of claim 4;

Considering claim **19**, a method comprising:

receiving a first frame of data; receiving a first timestamp associated with

the first frame of data, wherein the first timestamp includes complete timing

information for the first frame of data; receiving a second frame of data,

receiving a second timestamp associated with the second frame of data,

wherein the second timestamp includes a portion of the timing information.

Regarding claim 19, see rejection of claim 30.

Considering claim **20**, a method as recited in claim 19 further comprising

decoding the first frame of data and the second frame of data, is met by

decoder 135, Fig.1A.

Considering claim **21**, a method as recited in claim 19 further comprising:

a) receiving a third frame of data; b) receiving a third timestamp associated

with the third frame of data, wherein the third timestamp includes a portion

of the timing information; and decoding the third frame of data.

Regarding claim 21, see rejection of claim 19.

Considering claim **22**, a method as recited in claim 19 further comprising receiving timing information related to the manner in which frames of data are transmitted from a data source, is met by Decoder 135, fig.1A;

Considering claim 24, a method as recited in claim 19 wherein receiving the first timestamp includes updating all timing parameters with the information contained in the first timestamp, is implied in that when a timestamp information is received it would replace or update the timing information of the timestamp received earlier, since the received timestamp is replacing the previous one.

Considering claim **25**, a method as recited in claim 19 wherein receiving the second timestamp includes updating timing parameters with the information contained in the second timestamp.

See rejection of claim 24.

Considering claim **26**, one or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 19.

Regarding claim 26, see rejection of claim 9.

4.   Claims **4,6,13-15,19-22,24-26, 28, and 29** are rejected under 35 U.S.C.

103(a) as being unpatentable over Kesselring, U.S. Pat. No. **6,081,299** in view of

Higurashi U.S. Pat. No. **5,970,204.**

Considering claim **4**, a method as recited in claim 1 wherein the first

timestamp includes hour information, minute information, second

information, and a frame number.

Regarding claim 4, Kesselring discloses that MPEG header

information is used to specify frame rate and time stamp associated, video

and audio data. (col. 2, lines 45-49) Kesselring does not specifically disclose

details of the timestamp information. However, it is well known in the art

that the timestamp information comprises hour, minute, and second

information. It is also well known in the art that time stamp information may

be expressed as in hhmmss format. Higurashi discloses a time code data that

may be added to the information signal. Fig.4 of Higurashi illustrates the

time code data comprising units of frames, units of second, units of minutes,

units of hours and units of days. Therefore, it would have been obvious to

the skilled in the art at the time the invention was made to modify the system

of Kesselring by providing the format of Higurashi in the header data, so

Considering claim **28**, one or more computer-readable media as recited in

claim 27 wherein the complete time information includes hour information,

minute information, second information, and a frame number.

Regarding claim 28, see rejection of claim 4;

Considering claim **29**, one or more computer-readable media as recited in

claim 27 wherein each of the subsequent timestamps includes a frame

number.

Regarding claim 29, see rejection of claim 9.

Allowable Subject Matter

5.   The following is a statement of reasons for the indication of allowable

subject matter: the prior fails to disclose a method comprising wherein the

first timestamp is a full timestamp and the second timestamp is a
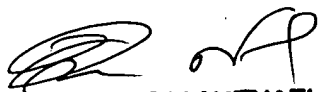
compressed timestamp, as in claim 23.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (703) 305-0019. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (703) 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PMN
June 28, 2004

PAULOS M. NATNAEL
PATENT EXAMINER